What is claimed is:

1. In a communication system, apparatus for changing the bandwidth of a circuit switched connection without taking down the connection comprising:

a network management system arranged to issue a connection create request effective during a first time period and a connection modify command effective during a second time period;

a first switching circuit comprising a first interface and a second interface, the first switching circuit being arranged to

receive data at the first interface,

be responsive to the connection create request during the first time period to reserve first resources at a first bandwidth for transmitting the data between the first and second interfaces at the first bandwidth and to launch a first path setup message using a signaling protocol, and

be responsive to the modify command during the second time period to reserve virtually concatenated second resources at a second bandwidth

greater than the first bandwidth for transmitting the data between the first and second interfaces at the second bandwidth and to launch a second path setup message using the signaling protocol;

a second switching circuit comprising a third interface and a fourth interface, the second switching circuit being arranged to

receive the data at the third interface,

be responsive to the first path setup message during the first time period to reserve third resources at the first bandwidth for transmitting the data between the third and fourth interfaces at the first bandwidth, and

be responsive to the second path setup message during the second time period to reserve virtually concatenated fourth resources at the second bandwidth for transmitting the data between the first and second interfaces at the second bandwidth; and

at least one network coupling the network management system, first switching circuit and second switching circuit.

2. A system, as claimed in claim 1, wherein the first and second switching circuits each comprise an add/drop multiplexer.

3. A system, as claimed in claim 1, wherein the first switching circuit comprises an add/drop multiplexer and wherein the second switching circuit comprises a digital cross-connect switch.

4. A system, as claimed in claim 1, wherein said at least one network comprises one or more of a SONET network, an SDH network and a WDM network.

5. A system, as claimed in claim 1, wherein the signal protocol is carried in one or more of a SONET DCC, SONET/SDH overhead bytes, an optical supervisory channel, and an out-of-band network.

6. A system, as claimed in claim 1, wherein the signal protocol comprises a fast signaling protocol.

7. A system, as claimed in claim 1, wherein the signal protocol comprises at least one of SS7, PNNI, RSVP-TE, and CR-LDP.

8. A system, as claimed in claim 1, wherein second switching circuit is responsive to the first path setup message to transmit a first acknowledge message and is

responsive to the second path setup message to transmit a second acknowledge message, and

wherein the first switching circuit is responsive to the first acknowledge message to complete a first connection between first and second interfaces using the first resources and is responsive to the second acknowledge message to complete a second connection between the first and second interfaces using the second resources, the first and the second connections being combined as a virtually concatenated connection.

9. A system, as claimed in claim 8, wherein the first switching circuit transmits a first connection update complete signal to the network management system in response to the completion of the first connection using the first resources and transmits a second connection complete signal to the network management system in response to the completion of the second connection using the second resources.

10. A system, as claimed in claim 1, wherein the first resources comprise a predetermined VT data

structure and the second resources comprise a multiple of the predetermined VT data structure.

11. A system, as claimed in claim 1, wherein the first resources comprise a predetermined STS data structure and the second resources comprise a multiple of the predetermined STS data structure.

12. A system, as claimed in claim 1, wherein the first and second switching circuits comprise buffers and wherein the first and second switching circuits reserve at least some of the buffers so that differential delays in the processing of the data are accommodated.

13. A system, as claimed in claim 1, wherein the first switching circuit transmits control information indicating a group ID and a group position for the data transmitted using the second resources.

14. In a data communication system comprising a first switching circuit and also comprising a second switching circuit, a method for changing the bandwidth of a circuit switched connection between the first and second switching circuits without taking down the connection comprising:

issuing a connection create request effective during a first time period and a connection modify command effective during a second time period;

responding to the connection create request during the first time period to reserve first resources at a first bandwidth for transmitting the data across the first switching circuit at the first bandwidth and to launch a first path setup message using a signaling protocol;

responding to the connection modify command during the second time period to reserve virtually concatenated second resources at a second bandwidth greater than the first bandwidth for transmitting the data across the first switching circuit at the second bandwidth and to launch a second path setup message using the signaling protocol;

responding to the first path setup message during the first time period to reserve third resources at the first bandwidth for transmitting the data across the second switching circuit at the first bandwidth;

responding to the second path setup message during the second time period to reserve virtually concatenated fourth resources at the second bandwidth for transmitting the data across the second switching circuit at the second bandwidth; and

coupling the first and second switching circuits.

15. A method, as claimed in claim 14, wherein the first and second switching circuits each comprise an add/drop multiplexer.

16. A method, as claimed in claim 14, wherein the first switching circuit comprises an add/drop multiplexer and wherein the second switching circuit comprises a digital cross-connect switch.

17. A method, as claimed in claim 14, wherein the system comprises one or more of a SONET network, an SDH network and a WDM network and wherein the coupling comprises coupling the first and second switching circuits with one or more of the SONET network, the SDH network and the WDM network.

18. A method, as claimed in claim 17, wherein the signal protocol is carried in one or more of a SONET DCC, SONET/SDH overhead bytes, an optical supervisory channel, and an out-of-band network.

19. A method, as claimed in claim 14, wherein the signal protocol comprises a fast signaling protocol.

20. A method, as claimed in claim 14, wherein the signal protocol comprises at least one of SS7, PNNI, RSVP-TE, and CR-LDP.

21. A method, as claimed in claim 14, wherein second switching circuit is responsive to the first path setup message to transmit a first acknowledge message and is responsive to the second path setup message to transmit a second acknowledge message, and

wherein the first switching circuit is responsive to the first acknowledge message to complete a first connection across the first switching circuit using the first resources and is responsive to the second acknowledge message to complete a second connection across the first switching circuit using the second resources.

22. A method, as claimed in claim 21, and further comprising transmitting a first connection complete signal in response to the completion of the first connection using the first resources and transmitting a second connection complete signal in response to the completion of the second connection using the second resources.

23. A method, as claimed in claim 14, wherein the first resources comprise a predetermined VT data structure and the second resources comprise a multiple of the predetermined VT data structure.

24. A method, as claimed in claim 14, wherein the first resources comprise a predetermined STS data structure and the second resources comprise a multiple of the predetermined STS data structure.

25. A method, as claimed in claim 14, and further comprising buffering at least some of the data so that differential delays in the processing of the data are accommodated.

26. A method, as claimed in claim 14, and further comprising transmitting control information indicating a

group ID and a group position for the data transmitted using the second resources.